

Patent Claims

1. Optical module containing a support (T) in which a groove (VG) is introduced and an optical fibre (F) mounted
5 in the groove (VG) characterized by a contact layer (CL) that is applied to the support (T) and comprises a plurality of strips extending essentially perpendicularly to the groove (VG) and that forms a mechanical joint with the fibre (F) when the fibre (F) is pressed into the groove
10 (VG).

2. Optical module according to Claim 1, in which the strip-shaped contact layer (CL) is composed of aluminium (Al).
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3. Optical module according to Claim 1, in which the fibre (F) is composed of SiO_2 or is coated with SiO_2 .

4. Optical module according to Claim 1, in which between
20 two and four strips having a width of about 200 μm each are provided.

5. Optical module according to Claim 1, in which a multiplicity of strips are provided that have a width of up
25 to a few tens of micrometres.

6. Optical module according to Claim 1, in which the strips are each structured in turn to form a plurality of narrow ribs.
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7. Optical module according to Claim 1, in which the groove (VG) is a V-groove.

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8. Optical module according to Claim 1, in which the last subsection of the groove (VG) in the direction of the support edge is free of the contact layer (CL).

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9. Support (T) for an optical module, containing a groove (VG) for fixing an optical fibre (F), characterized by a contact layer (CL) applied to the support (T) and composed of a plurality of strips extending essentially
10 perpendicularly to the groove (VG) and that forms a mechanical joint with the fibre (F) when the fibre (F) is pressed into the groove (VG).

10. Method of producing an optical module containing a
15 support (T) into which a groove (VG) has been introduced and an optical fibre (F) mounted in the groove (VG), comprising the following steps:

- . introduction of the groove (VG) into the support (T),
- . application of a contact layer (CL) that is composed
20 of a plurality of strips extending essentially perpendicularly to the groove (VG) and that forms a mechanical joint with the fibre (F) when the fibre (F) is pressed into the groove (VG), and
- . pressing of the optical fibre (F) into the groove
25 (VG).

11. Method according to Claim 10, in which the fibre (F) is stripped before being pressed in.

30 12. Method according to Claim 10, in which the pressing-in is carried out at a temperature of 200° to 400°C, preferably of 300° to 350°C.

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13. Method according to Claim 10, in which the contact layer (CL) is applied by sputtering and, in which process, a mask having slots is used for the contact-layer strips.

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14. Method according to Claim 10, in which the contact layer (CL) is applied as a blanket and then structured by applying an etching procedure to form strips extending essentially perpendicularly to the groove (VG).

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